ZooKeys 441: 251–257 (2014)
doi: 10.3897/zookeys.441.7227
www.zookeys.org

CHECKLIST

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Checklist of the superfamilies Conopoidea, Diopsoidea and Nerioidea of Finland (Insecta, Diptera)

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Academic editor: *J. Salmela* | Received 28 February 2014 | Accepted 28 April 2014 | Published 19 September 2014

http://zoobank.org/6CE8F3E1-4DA1-4E7C-93B2-ACA484FFA7A1

Citation: Kahanpää J, Stuke J-H (2014) Checklist of the superfamilies Conopoidea, Diopsoidea and Nerioidea of Finland (Insecta, Diptera). In: Kahanpää J, Salmela J (Eds) Checklist of the Diptera of Finland. ZooKeys 441: 251–257. doi: 10.3897/zookeys.441.7227

Abstract

A checklist of the Diptera superfamilies Conopoidea (Conopidae), Nerioidea (Micropezidae, Pseudopomyzidae) and Diopsoidea (Megamerinidae, Psilidae, Strongylophthalmyiidae, Tanypezidae) from Finland in presented. *Myopa vicaria* Walker, 1849 is formally recorded for the first time from the country.

Keywords

Checklist, Finland, Diptera, biodiversity, faunistics

Introduction

Four fly families form the superfamily Nerioidea. Two of them, Micropezidae and Pseudopomyzidae, occur in Finland. Neriids are mostly tropical and cypselomatids (*sensu stricto*) have only been found in the Australasian and Oriental regions. The pseudopomyzids were included in Cypselosomatidae Hendel, 1931 in the previous checklist (Hackman 1980) and are still often included in Cypselosomatidae *sensu lato*. The

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Table 1. Number of species by family.

Family	Number of species in			Level of knowledge
	World (Pape et al. 2011)	**Europe**	**Finland**	
Conopidae	~796	83	19	good
Nerioidea:				
Micropezidae	573	22	6	average
Pseudopomyzidae	18	1	1	good
Diopsoidea:				
Psilidae	320	47	29	average
Tanypezidae	27 (Lonsdale 2013)	1	1	good
Strongylophthalmyiidae	47 (Lonsdale 2013)	2	2	good
Megamerinidae	15	1	1	good

Finnish micropezid fauna is relatively well known. One or two species of *Cnodacophora* Czerny, 1930 and *Rainieria* Rondani, 1843 could be present but are so far undetected.

Diopsoidea consists of seven to ten families (depending on the source), none particularly species-rich. Only four are found in Finland: Psilidae, Tanypezidae, Strongylophthalmyiidae and Megamerinidae. Tanypezidae and Strongylophthalmyiidae are here treated as separate families following Lonsdale (2013). Megamerinidae has been assigned to several superfamilies, most often Diopsoidea following McAlpine (1989), but also Nerioidea, Sciomyzoidea, and recently Opomyzoidea (Wiegmann et al. 2011). These families have raised no particular interest among Finnish dipterists. The genus *Chamaepsila* Hendel, 1917 in particular needs more attention. It is likely that a few Finnish species remain unrecognised in this genus.

The systematic position of the Conopidae is unclear. It has traditionally been considered basal within Schizophora. Wiegmann et al. (2011) listed Conopidae within Sciomyzoidea while others (see Skevington et al. 2010) place the family near Tephritoidea. Within the family the recent classification of Gibson and Skevington (2013) is followed. The Finnish conopid fauna is now relatively well-understood and few additional species are expected to occur in the country.

The Finnish species of these families were last listed by Hackman (1980).

Checklist part 1: Conopoidea

suborder Brachycera Macquart, 1834
clade Eremoneura Lameere, 1906
clade Cyclorrhapha Brauer, 1863
infraorder Schizophora Becher, 1882
? clade Archischiza Enderlein, 1936
superfamily Conopoidea Latreille, 1802

CONOPIDAE Latreille, 1802
CONOPINAE Latreille, 1802
CONOPS Linnaeus, 1758
sg. *Conops* Linnaeus, 1758
Conops quadrifasciatus De Geer, 1776
Conops strigatus Wiedemann, 1824
Conops vesicularis Linnaeus, 1761
PHYSOCEPHALA Schiner, 1861
Physocephala nigra (De Geer, 1776)
ZODIONINAE Rondani, 1856
ZODION Latreille, 1796
Zodion cinereum (Fabricius, 1794)
= *notatum* Meigen, 1804
SICINAE Zimina, 1960
SICUS Scopoli, 1763
Sicus ferrugineus (Linnaeus, 1761)
MYOPINAE Macquart, 1834
MYOPA Fabricius, 1775
Myopa buccata (Linnaeus, 1758)
Myopa fasciata Meigen, 1804
Myopa hirsuta Stuke & Clements, 2008
= *strandi* auct. nec Duda, 1940
Myopa occulta Wiedemann, 1824
= *nigrifrons* von Bonsdorff, 1866
Myopa tessellatipennis Motschulsky, 1859
= *polystigma* auct. nec Rondani, 1857
Myopa testacea (Linnaeus, 1767)
Myopa vicaria Walker, 1849
= *villosa* Ringdahl, 1945
= *strandi* Duda, 1940
MYOPOTTA Zimina, 1969
Myopotta pallipes (Wiedemann, 1824)
THECOPHORA Rondani, 1845
= ***Occemyia*** Robineau-Desvoidy, 1853
Thecophora cinerascens (Meigen, 1804)
= *pusilla* (Meigen, 1824)
= *atra* misid.
Thecophora distincta (Wiedemann, 1824)
= *melanopa* misid.
Thecophora fulvipes (Robineau-Desvoidy, 1830)
= *sundewalli* (Zetterstedt, 1844)
Thecophora jakutica Zimina, 1974
= *atra* misid.

DALMANNIINAE Hendel, 1916
DALMANNIA Robineau-Desvoidy, 1830
Dalmannia dorsalis (Fabricius, 1794)
= *punctata* misid.

Checklist part 2: Nerioidea and Diopsoidea

suborder Brachycera Macquart, 1834
clade Eremoneura Lameere, 1906
clade Cyclorrhapha Brauer, 1863
infraorder Schizophora Becher, 1882
clade Muscaria Enderlein, 1936
parvorder Acalyptratae Macquart, 1835
superfamily Nerioidea Westwood, 1840

MICROPEZIDAE Blanchard, 1840
CALOBATINAE Bigot, 1853
CALOBATA Meigen, 1803
Calobata petronella (Linnaeus, 1761)
NERIA Robineau-Desvoidy, 1830
Neria cibaria (Linnaeus, 1761)
Neria commutata (Czerny, 1930)
= *nigricornis* auct. nec Zetterstedt, 1838
Neria ephippium (Fabricius, 1794)
Neria nigricornis (Zetterstedt, 1838)
= *helleni* (Frey, 1918)
= *nitidicollis* (Frey, 1947)
MICROPEZINAE Blanchard, 1840
MICROPEZA Meigen, 1803
Micropeza corrigiolata (Linnaeus, 1767)

PSEUDOPOMYZIDAE McAlpine, 1966
PSEUDOPOMYZA Strobl, 1893
Pseudopomyza atrimana (Meigen, 1830)

superfamily Diopsoidea Billberg, 1820

MEGAMERINIDAE Hendel, 1913
MEGAMERINA Rondani, 1861
= ***Lissa*** Meigen, 1826 preocc.
Megamerina dolium (Fabricius, 1805)
= *loxocerina* (Fallén, 1820)

PSILIDAE Macquart, 1835
CHYLIZINAE Rondani, 1856
CHYLIZA Fallén, 1820
sg. *Chyliza* Fallén, 1820
Chyliza annulipes Macquart, 1835
= *fuscipennis* auct. nec Robineau-Desvoidy, 1830
Chyliza leptogaster (Panzer, 1798)
= *scutellata* (Fabricius, 1798)
Chyliza nova Collin, 1944
Chyliza vittata Meigen, 1826
PSILINAE Macquart, 1835
tribe Loxocerini Macquart, 1835
IMANTIMYIA Frey, 1925
Imantimyia albiseta (Schrank, 1803)
= *ichneumonea* (Linnaeus, 1758) nom. dubium (see Notes)
Imantimyia fulviventris (Meigen, 1826)
Imantimyia nigrifrons (Macquart, 1835)
Imantimyia sylvatica (Meigen, 1826)
LOXOCERA Meigen, 1803
sg. *LOXOCERA* Meigen, 1803
Loxocera aristata (Panzer, 1801)
= *ichneumonea* (Linnaeus, 1758) nom. dubium (see Notes)
tribe Psilini Macquart, 1835
CHAMAEPSILA Hendel, 1917
= ***Tetrapsila*** Frey, 1925
Chamaepsila atra (Meigen, 1826)
Chamaepsila bicolor (Meigen, 1826)
= *nigromaculata* (Strobl, 1909)
Chamaepsila buccata (Fallén, 1826)
= *gracilis* (Meigen, 1826)
Chamaepsila humeralis (Zetterstedt, 1847)
Chamaepsila limbatella (Zetterstedt, 1847)
Chamaepsila morio (Zetterstedt, 1835)
Chamaepsila nigra (Fallén, 1820)
Chamaepsila nigricornis (Meigen, 1826)
Chamaepsila nigrosetosa Frey, 1925
Chamaepsila obscuritarsis (Loew, 1856)
Chamaepsila pallida (Fallén, 1820)
Chamaepsila pectoralis (Meigen, 1826)
Chamaepsila rosae (Fabricius, 1794)
Chamaepsila rufa (Meigen, 1826)
Chamaepsila unilineata (Zetterstedt, 1847)
PSILA Meigen, 1803

sg. *FREYOPSILA* Shatalkin, 1986
Psila sibirica (Frey, 1925)
sg. *PSILA* Meigen, 1803
Psila fimetaria (Linnaeus, 1761)
Psila merdaria Collin, 1944
PSILOSOMA Zetterstedt, 1860
Psilosoma audouini (Zetterstedt, 1835)
Psilosoma lefebvrei (Zetterstedt, 1835)

STRONGYLOPHTHALMYIIDAE Hendel, 1917
STRONGYLOPHTHALMYIA Heller, 1902
Strongylophthalmyia pictipes Frey, 1935
Strongylophthalmyia ustulata (Zetterstedt, 1847)

TANYPEZIDAE Rondani, 1856
TANYPEZA Fallén, 1820
Tanypeza longimana Fallén, 1820

Excluded species

Dalmannia punctata (Fabricius, 1794) not found within present borders.

Notes

***Chamaepsila unilineata* (Zetterstedt, 1847)** and ***C. nigrosetosa* Frey, 1925** were synonymized with *C. pallida* but they have recently been reinstated as valid species (Shatalkin and Merz 2010).

***Loxocera ichneumonea* (Linnaeus, 1758)**. This name has been used for *L. aristata* (Panzer) and *L. albiseta* (Schrank). Unfortunately no type material is known. Linné's original description is insufficient and may in fact belong to a hoverfly (see Buck and Marshall 2006).

***Myopa vicaria* Walker, 1849**. One of the common *Myopa* species through Finland, but previously unreported due to difficulties in identification. Recorded from provinces *Ab*, *N*, *Ka*, *St*, *Ta*, *Sa*, *Kl*, *Om*, *Ok*, *Lkoc* and *Li*.

References

Buck M, Marshall SA (2006) Revision of New World *Loxocera* (Diptera: Psilidae), with phylogenetic redefinition of Holarctic subgenera and species groups. European Journal of Entomology 103: 193–219. doi: 10.14411/eje.2006.022

Gibson JF, Skevington JH (2013) Phylogeny and taxonomic revision of all genera of Conopidae (Diptera) based on morphological data. Zoological Journal of the Linnean Society 167(1): 43–81 doi: 10.1111/j.1096-3642.2012.00873.x

Hackman W (1980) A check list of the Finnish Diptera. Notulae entomologicae 60: 17–48, 117–162.

Lonsdale O (2013) Review of the families Tanypezidae and Strongylophthalmyiidae, with a revision of *Neotanypeza* Hendel (Diptera: Schizophora). Smithsonian Contributions to Zoology 641: 1–60. http://160.111.252.33/handle/10088/21132, doi: 10.5479/si.19436696.641.1

McAlpine JF (1989) Phylogeny and classification of the Muscomorpha. In: McAlpine JF, Wood DM (Eds) Manual of Nearctic Diptera Volume 3. Agriculture Canada Monographs 32. Research Branch, Agriculture Canada, Ottawa, 1397–1518.

Pape T, Blagoderov V, Mostovski MB (2011) Order Diptera Linnaeus, 1758. In: Zhang Z-Q (Ed) Animal biodiversity: An outline of higher-level classification and survey of taxonomic richness. Zootaxa 3148: 222–229. http://www.mapress.com/zootaxa/2011/f/zt03148p229.pdf

Shatalkin AI, Merz B (2010) The Psilidae (Diptera, Acalyptrata) of Switzerland, with description of two new species from Central Europe. Revue Suisse de Zoologie 117(4): 771–800. www.biodiversitylibrary.org/part/117602

Skevington JH, Thompson FC, Camras S (2010) Conopidae (Thick-headed Flies). In: Brown BV, Borkent A, Cumming JM, Wood DM, Woodley NE, Zumbado MA (Eds) Manual of Central American Diptera, Volume 2. NRC Research Press, Ottawa, 847–855.

Wiegmann BM, Trautwein MD, Winkler IS, Barr NB, Kim J-W, Lambkin C, Bertone MA, Cassel BK, Bayless KM, Heimberg AM, Wheeler BM, Peterson KJ, Pape T, Sinclair BJ, Skevington JH, Blagoderov V, Caravas J, Kutty SN, Schmidt-Ott U, Kampmeier GE, Thompson FC, Grimaldi DA, Beckenbach AT, Courtney GW, Friedrich M, Meier R, Yeates DK (2011) Episodic radiations in the fly tree of life. Proceedings of the National Academy of Sciences of the United States of America 108(14): 5690–5695. doi: 10.1073/pnas.1012675108